

REMARKS/ARGUMENTS

Claims 1-22 are pending in the application. Claims 1-6 and 10-17 are withdrawn from consideration, in view of a Restriction Requirement. Claims 17-22 are added. Support for claims 17-21 can be found in claims 3-7, as originally filed. Support for claim 22 can be found in the specification at page 8, lines 15-18 and claim 8, as originally filed. No new matter has been added.

Reconsideration of the claimed invention is requested in view of the following remarks.

Rejection under 35 U.S.C. § 103

The rejection of claims 7 and 9 are rejected under 35 U.S.C. § 103(a) as obvious over Johnson (US Patent No. 4,098,941) and further in view of Glück et al. (US Patent No. 6,340,713); and claim 8 as obvious over Johnson and further in view of Glück et al. and Tung et al. (US Patent No. 6,214,897) is respectfully traversed.

The references, alone or in combination, do not describe or suggest the *expandable pelletized thermoplastic polymer material*, which comprises from 5 to 50% by weight of one or more fillers selected from the group consisting of talc, chalk, kaolin, aluminum hydroxide, aluminum nitrite, aluminum silicate, calcium carbonate, calcium sulfate, silica, powdered quartz, Aerosil, alumina and glass beads.

As the Office is aware, obviousness analysis under 35 U.S.C. § 103 requires, *inter alia*, consideration of the differences between prior art references and the claims at issue. *See KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007) (“*KSR*”) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18, 86 S.Ct. 684 (1966) (“*Graham*”)) (describing factors that control an obviousness inquiry). In *Graham*, the U.S. Supreme Court (“Court”) set forth the framework for applying the statutory language of 35 U.S.C. § 103, and in *KSR* the Court determined that the *Graham* factors were still useful and provided “helpful insight” to an obviousness inquiry. *KSR*, 127 S. Ct. at 1741. The Court further indicated that a “teaching, suggestion, motivation” to combine need not be explicit in every case. *Id.*

However, in making its obviousness determination, the Court indicated the importance of identifying a “reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Takeda Chem. Indus., v.*

Alphapharm Pty. Ltd., 492 F.3d 1350, 1356-57 (Fed. Cir. 2007) (“*Takeda*”) (quoting *KSR*, 127 S. Ct. at 1731). In the chemical case *Takeda*, the U.S. Court of Appeals for the Federal Circuit concurred with the Court’s reasoning by also emphasizing that there must be some identified reason that would have “prompted” a chemist to make a modification in a particular manner to establish *prima facie* obviousness. 492 F.3d at 1350; *see also Ex parte Martin Haubner and Rolf Pinkos*, Appeal No. 2009-0449 (explaining that “in rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a case of *prima facie* obviousness,” and finding that the claims were not obvious over the cited combination of references).

In the present case, Applicant points out that the Office has not shown, other than improper hindsight of the present specification, that the cited references of record describe *all* of the specific components of the claimed *expandable pelletized thermoplastic polymer material* or provided reasoning that supports a conclusion of obviousness.

In particular, the present invention provides expandable pelletized thermoplastic polymer materials which, at high filler contents, can be prefoamed to give predominantly closed-cell foam beads, and can be fused to yield moldable-foam moldings. Moreover, even with the addition of the presence of fillers, the inventive moldable-foam moldings have a high proportion of closed cells, e.g., more than 60% of the cells of the individual foam beads generally being of closed-cell type. (*See* present specification, e.g., at page 3, lines 1-14).

By contrast, Johnson is not concerned at all with the object of the present invention. Instead, the reference describes controlling the cooling conditions of a particular thermoplastic, polystyrene foam, so as to greatly enhance that material’s strength properties. In particular, the reference refers to “a means for the production of a polystyrene foam extrudate wherein the temperature of the cooling fluid, and thus the cooled extrudate may be very precisely controlled.” (Column 2, lines 24-30). Further, as appreciated by the Office, the reference does not describe a composition that incorporates the claimed fillers and content thereof. (Office Action at pages 3-4, para. 7). As such, one would clearly not rely on the disclosure of Johnson as a basis for achieving the claimed invention.

Regarding Glück et al., Applicants note that the reference describes particulate, expandable styrene polymers containing graphite particles. However, as shown by the several examples in the reference at columns 4-7, there is no suggestion or guidance for formulating an

expandable pelletized thermoplastic polymer with the presence of the claimed fillers. Moreover, as appreciated by the Office, the reference does not indicate that the graphite is expandable. (Office Action at page 5, para. 12). Therefore, Glück et al. does not cure the deficiencies of Johnson.

Regarding Tung et al., the Office asserts that it would have been obvious “to use expandable graphite as taught by Tung et al. for use in the compositions of Glück et al. and Johnson in order to enhance the flame retardant properties of the several styrene products.” (Office Action at page 5, para. 13). However, Applicants point out that Tung et al describes an entirely different composition. Specifically, Tung et al. describes a semi-semi-crystalline polycondensed branched polyester polymer blended with an aromatic polycarbonate, with possible incorporation of several types of additives in the mixed composition. (See, e.g., col. 2, line 49 to col. 3, line 8). As such, absent improper hindsight reconstruction of the claimed invention, one would not selectively pick and choose additives from Tung et al. to modify the other references. Further, there is no apparent reason to modify the references for flame retardant purposes, since Glück et al. indicates that the foams are self-extinguishing (with flame retardants).

Therefore, claimed *expandable pelletized thermoplastic polymer material* is novel and unobvious over the cited references of record. Accordingly, withdrawal of the rejection is requested.

Applicants further submit that new claims 17-22, dependent directly or indirectly from claim 7, are novel and unobvious over the cited references of record.

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution, the undersigned is available at the telephone number noted below.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 12810-00267-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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